

Programming for Robotics




Newbury Park High School 2016

Course Programs

PFR.00.01

Created by LCpl Rice
20160629

- 
- EasyC for VEX EDR
 - RobotC for VEX EDR
 - Eclipse for FRC roboRIO
 - VJC for Abilix C-Series
 - Other Online Accounts

Learning Objectives

Terminal = What you walk away with
Enabling = What you will be evaluated on

Terminal Learning Objectives

- text

Enabling Learning Objectives

- text

Terms & Abbreviations

- IDE - Integrated development environment, aka: The program you use to interface and write code in.
- VCS - Version Control Software
- Compiler - Translates the human written code into a format that the computer or robot can read.
- OS - Operating System (Mac, Windows, Linux, other)
- CLI - Command Line Interface
- GUI - Graphic User Interface

EasyC for VEX

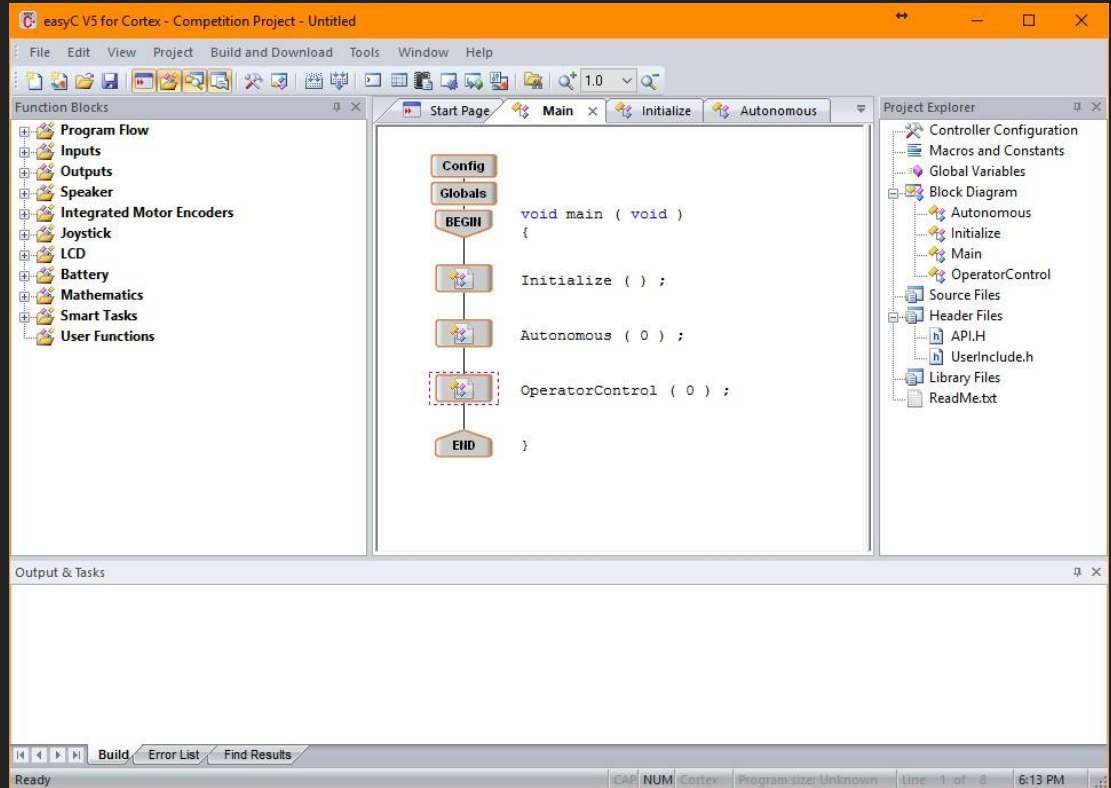
Will be used for the 1st ¼ of class

Visual Drag & Drop IDE

Works with VEX EDR Cortex (PIC?)

\$75 for 1 license

Skip Install Instructions



EasyC for VEX Install Instructions



easyC[®]
V5

VEX IQ

VEX
EDR

Download easyC V5 Version 5.0.0.2

Click the link above to download the current version of easyC V5.

New features include:

- Full Featured Trial Period (15 Days)
- File Size: 214MB
- VEX IQ Support
 - Simplified User Interface for Vex IQ Users
 - Windows ribbon-style interface toolbar
 - Function block color scheme matches VEX color palette
 - Dynamic controller configuration screen that maps ports to custom component names
 - Intuitive wizard-like programming interface
 - Simplified variable types
 - Support for all VEX IQ sensors
 - Includes Firmware Utility v1.20
- VEX EDR Support (Cortex)
 - Updated Firmware Utility 4.1.7
 - Updated Mastercode Firmware 4.25
 - Windows 8 Signed Drivers

System Requirements:

- Windows x86 PC Vista/7/8
- 1024MB RAM, 512MB HDD, 1024x768 Display
- VEXnet 2.0 Support Requires Radio Version 1.46

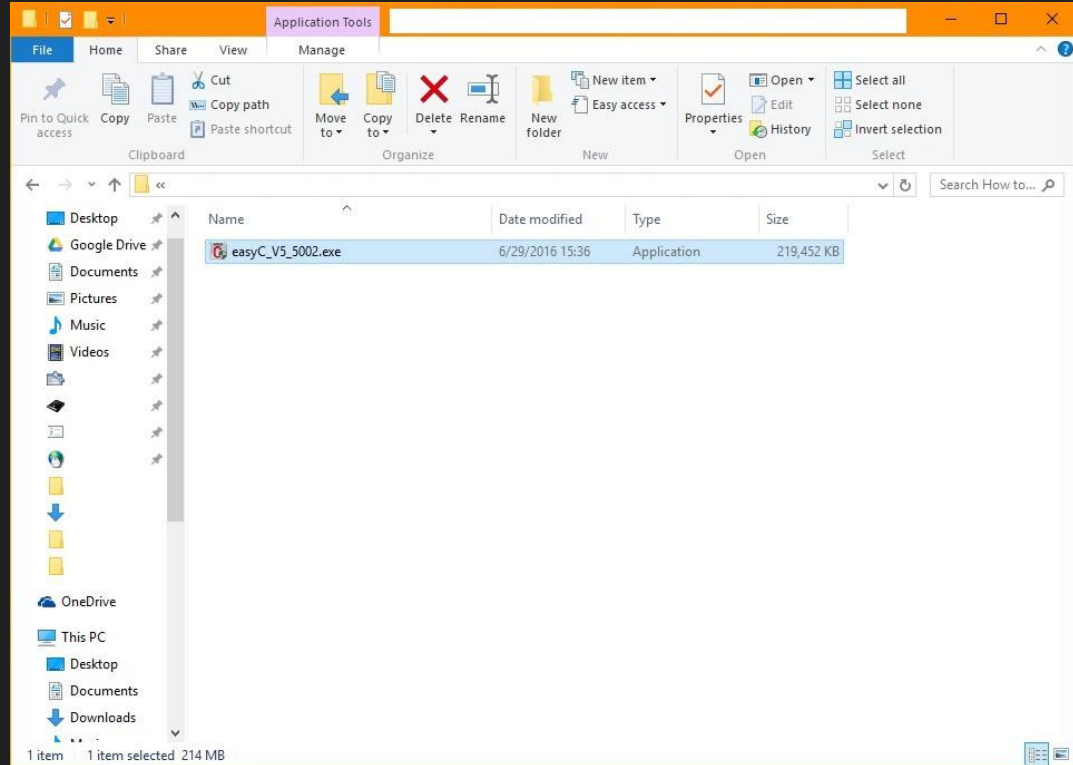
Release Date: 3-18-2015

VEX IQ Firmware and Drivers 1.20

This is the latest supported firmware version for the VEX IQ control system. This package is also installed with easyC V5.

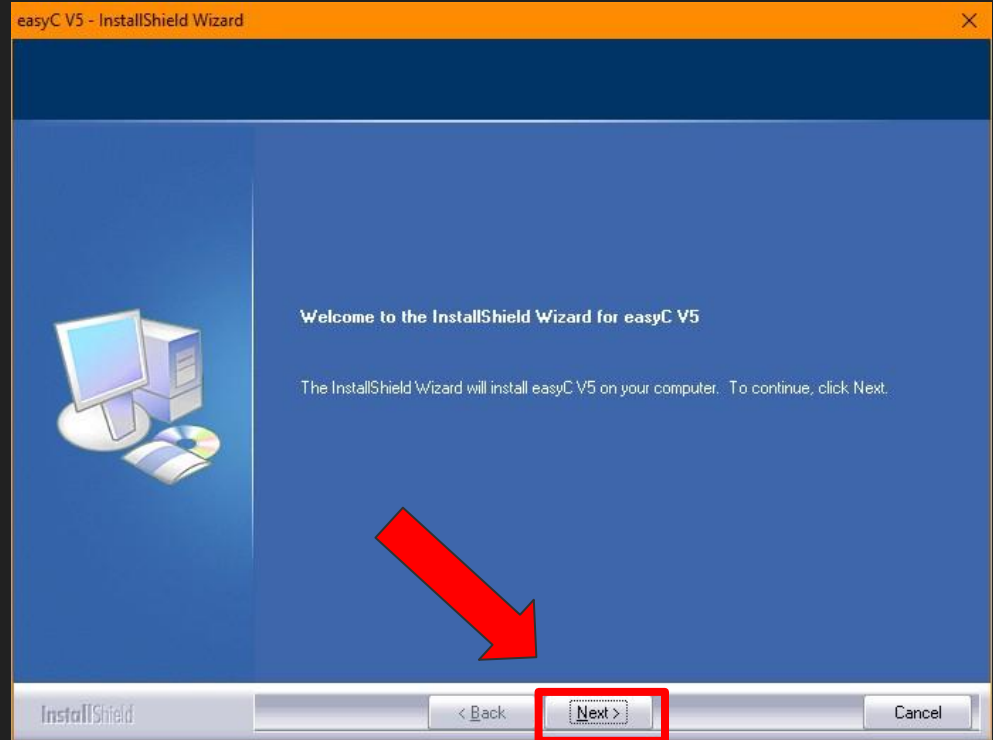
EasyC for VEX Install Instructions

Open the install file
(easyC_V5_5002.exe)



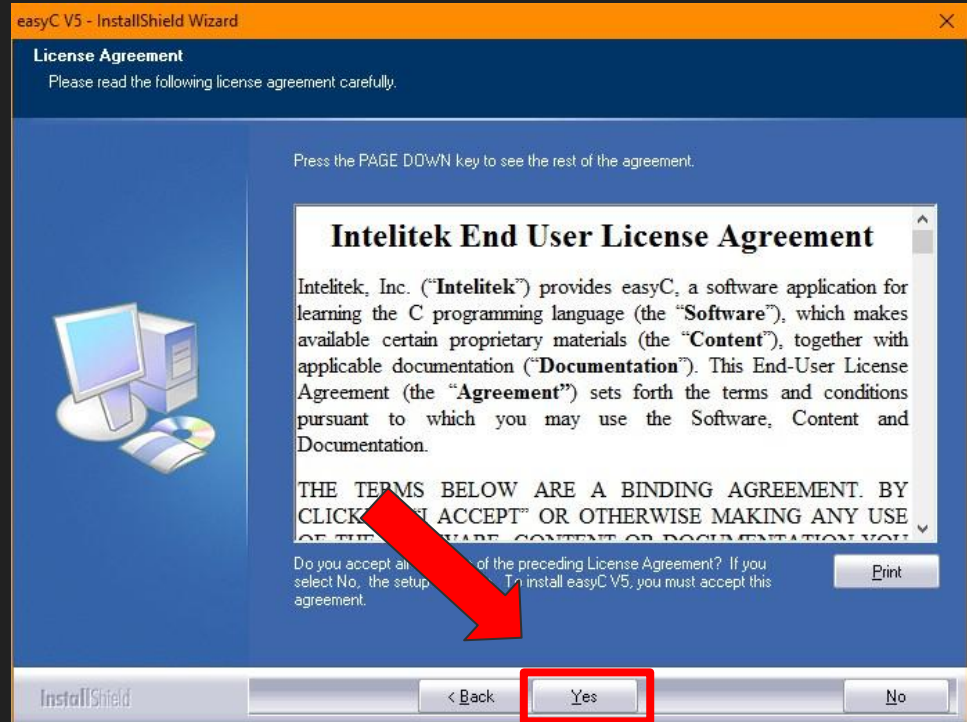
EasyC for VEX Install Instructions

Click Next >



EasyC for VEX Install Instructions

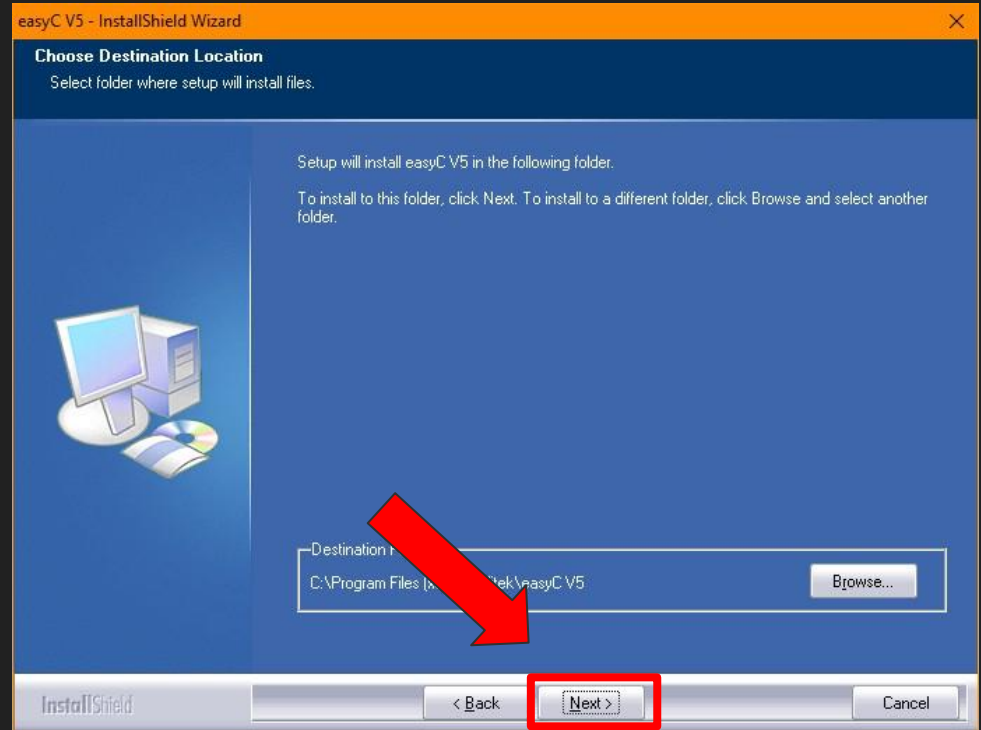
Click Yes to agree



EasyC for VEX Install Instructions

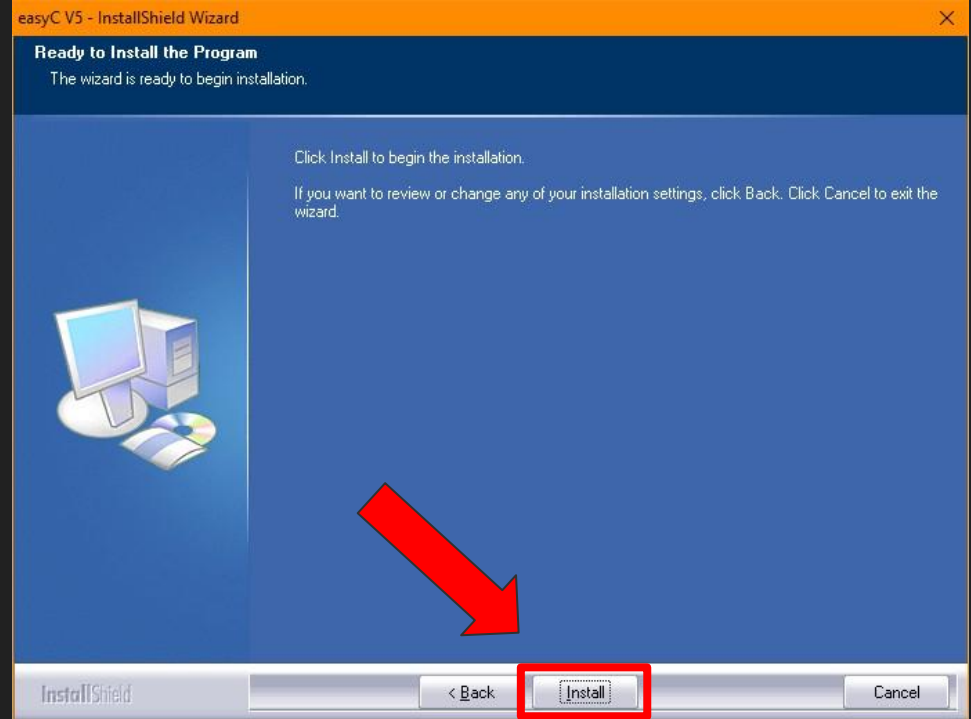
Click Next

(or choose a different
install location, then
click Next)



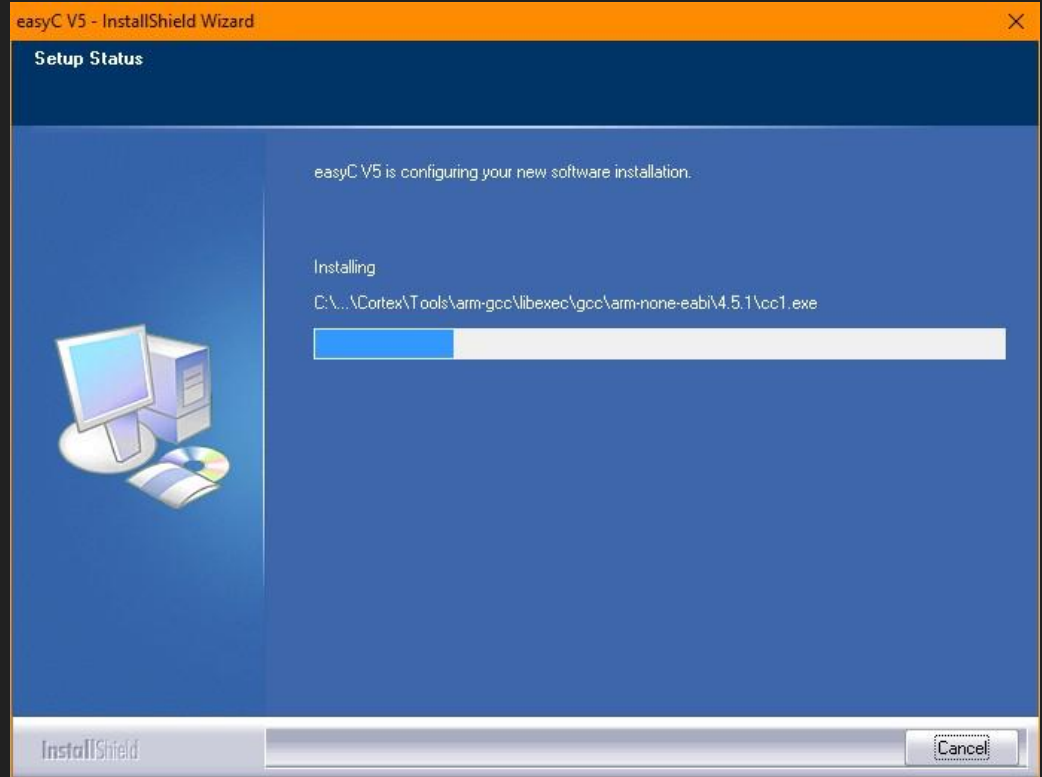
EasyC for VEX Install Instructions

Click Install



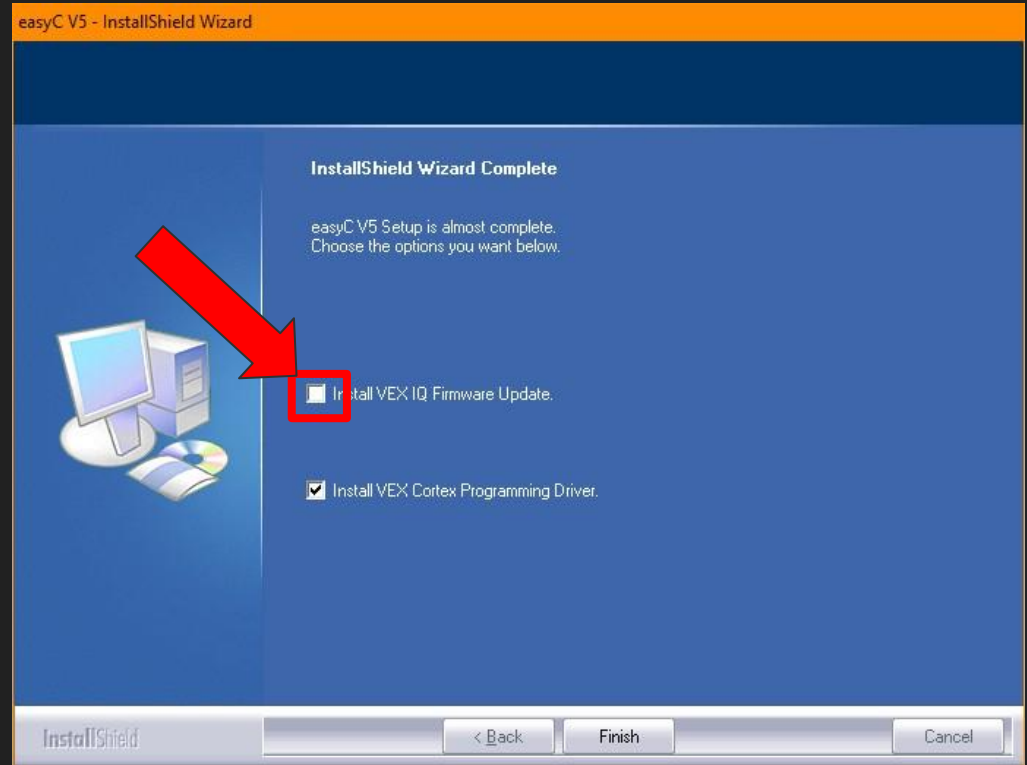
EasyC for VEX Install Instructions

Wait for the program to
complete installation...



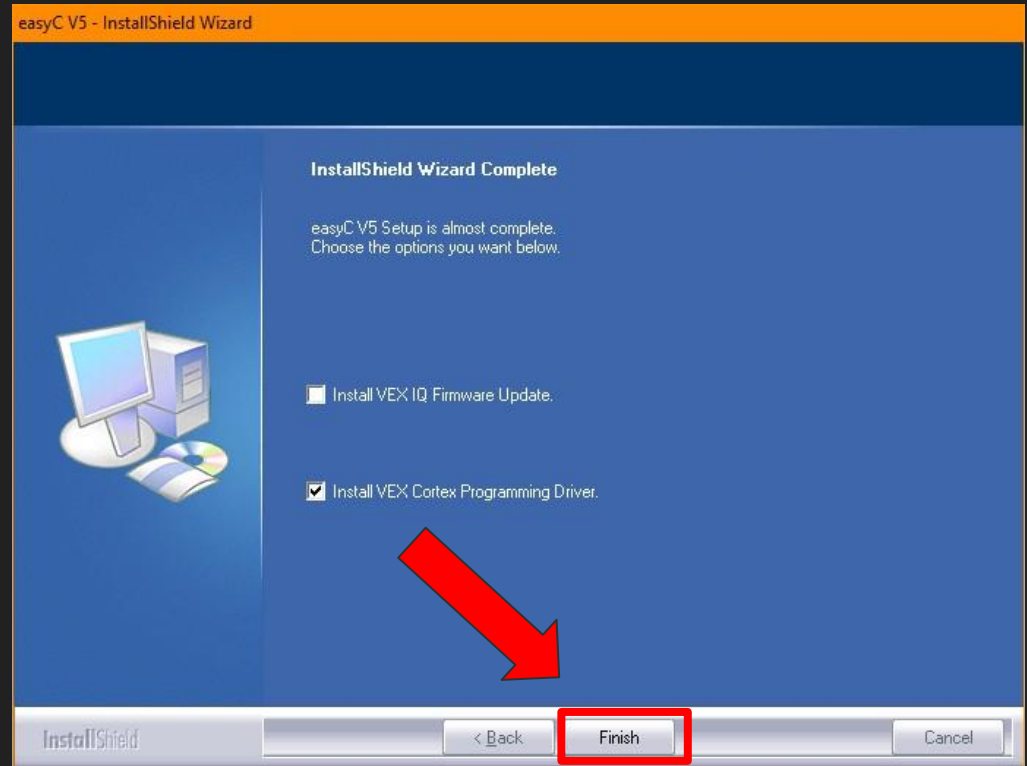
EasyC for VEX Install Instructions

DESELECT the 1st checkbox - it installs files for a device we do not use. Make sure the 2nd checkbox is still checked, as we need that!



EasyC for VEX Install Instructions

Click Finish



EasyC for VEX Install Instructions

If this window appears, ignore it and wait for the next window to pop up.

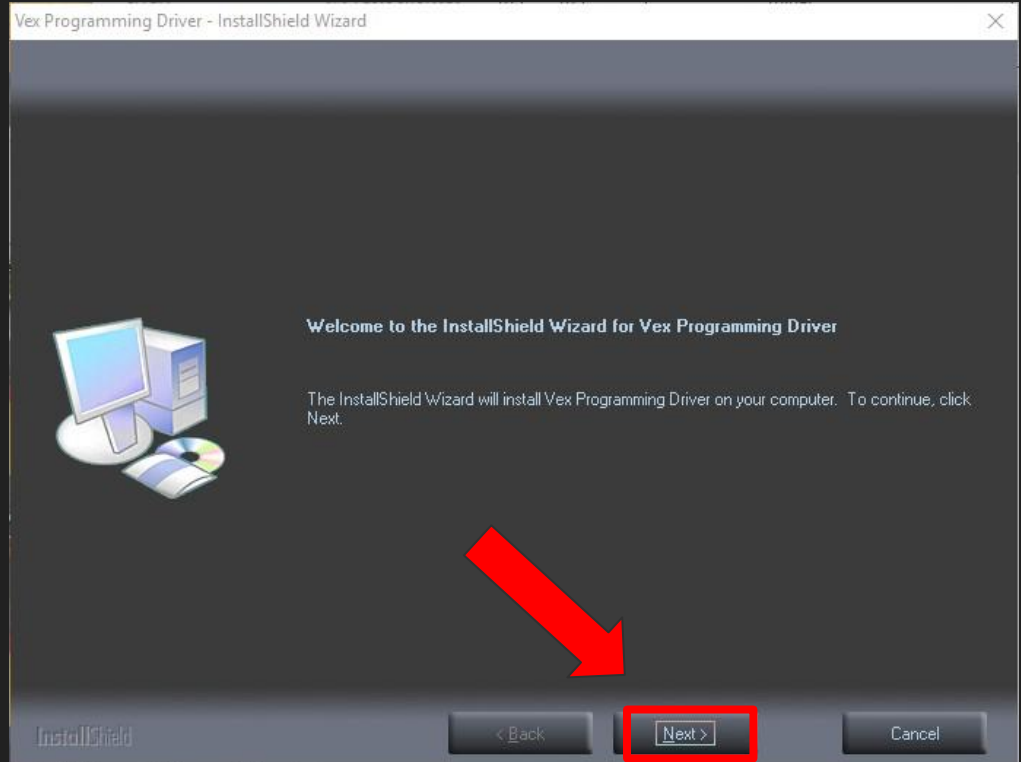


Installing VEX Cortex Programming Driver. Please wait...

EasyC for VEX Install Instructions

Click Next

(If this window does not
appear, something
went wrong)



EasyC for VEX Install Instructions

Click OK

(If this window does not appear, something went wrong)



EasyC for VEX Install Instructions

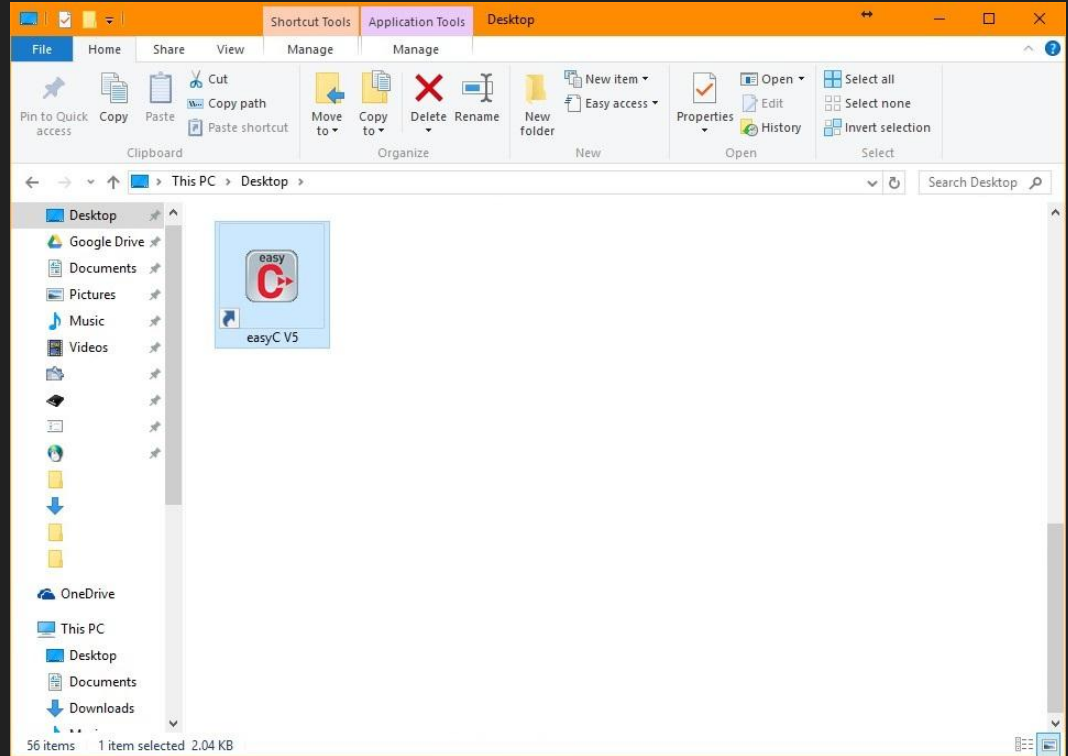
Wait for this window to disappear, then installation is complete!



Installing VEX Cortex Programming Driver. Please wait...

EasyC for VEX Install Instructions

Double Click the
desktop icon to open
EasyC V5



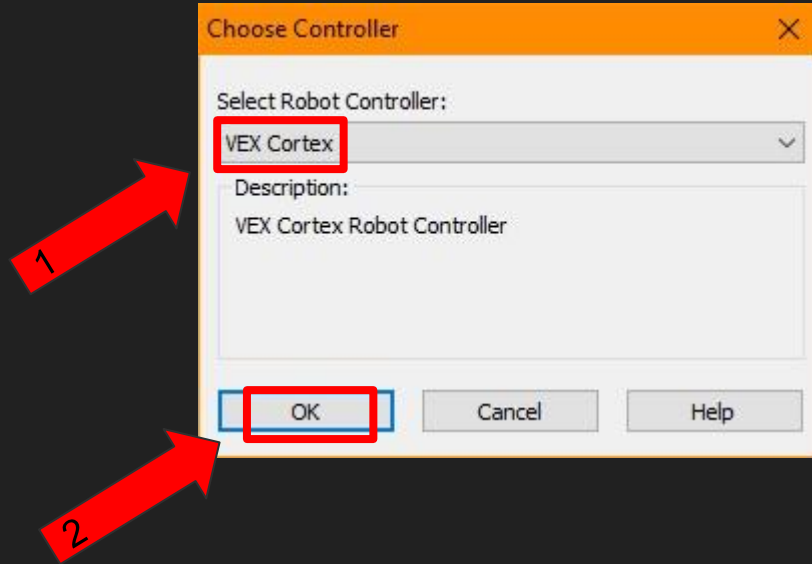
EasyC for VEX Install Instructions

If this window pops up,
just wait until the next
one.



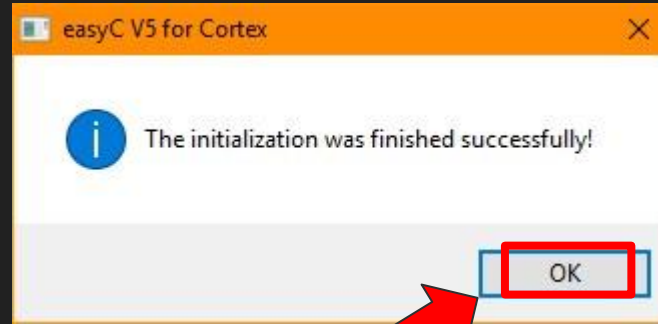
EasyC for VEX Install Instructions

If this window pops up then select VEX Cortex from the drop down menu and click OK



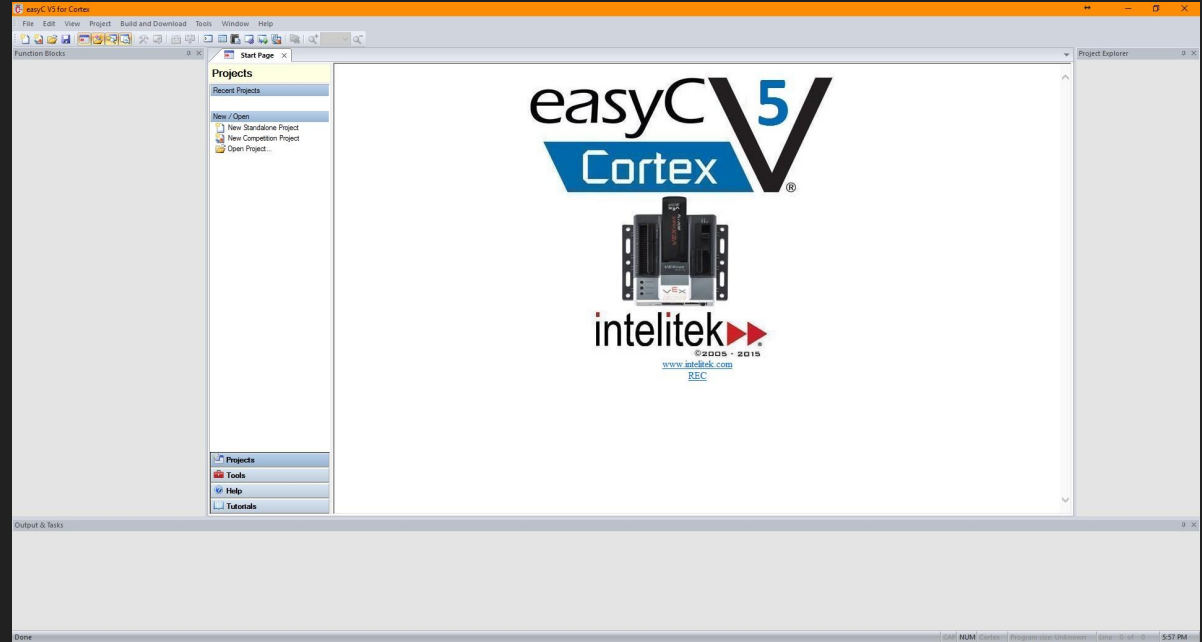
EasyC for VEX Install Instructions

Click OK



EasyC for VEX Install Instructions

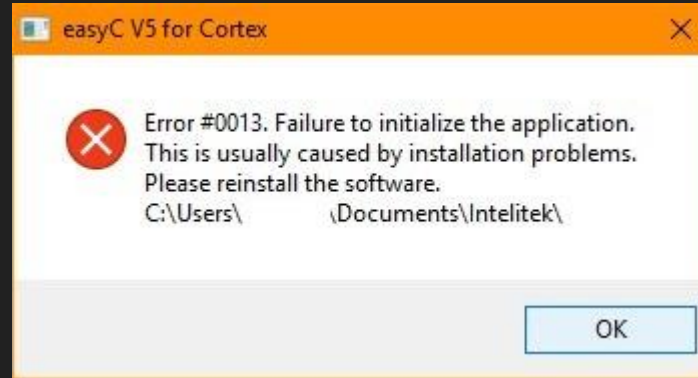
If this window shows up now, everything works -- if NOT, go to the next slide.



Skip if Everything Works

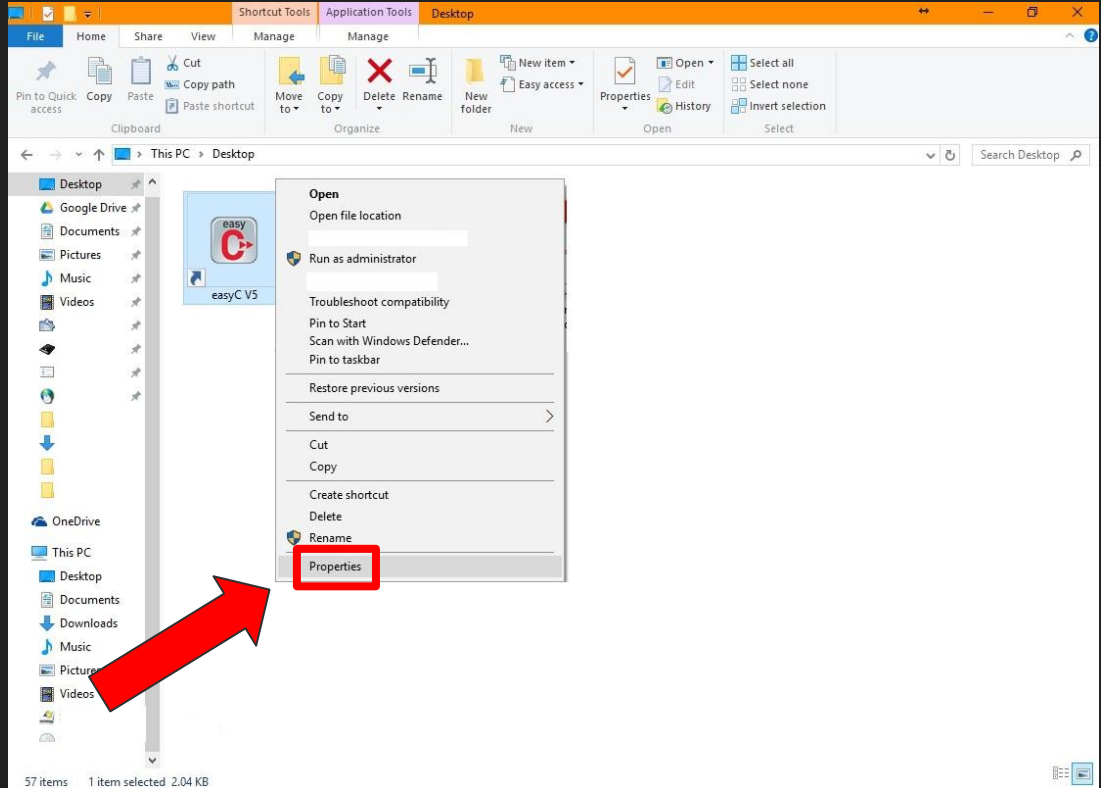
EasyC for VEX Install Instructions

If you got this ERROR,
then you must run the
program in
compatibility mode.
Click next slide to
continue.



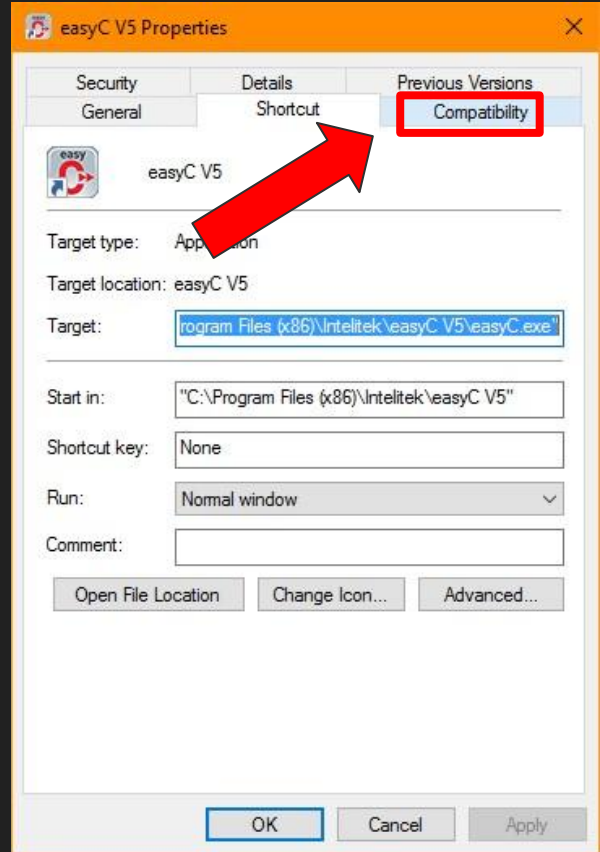
EasyC for VEX Install Instructions

Right click on the
shortcut icon, and
select Properties



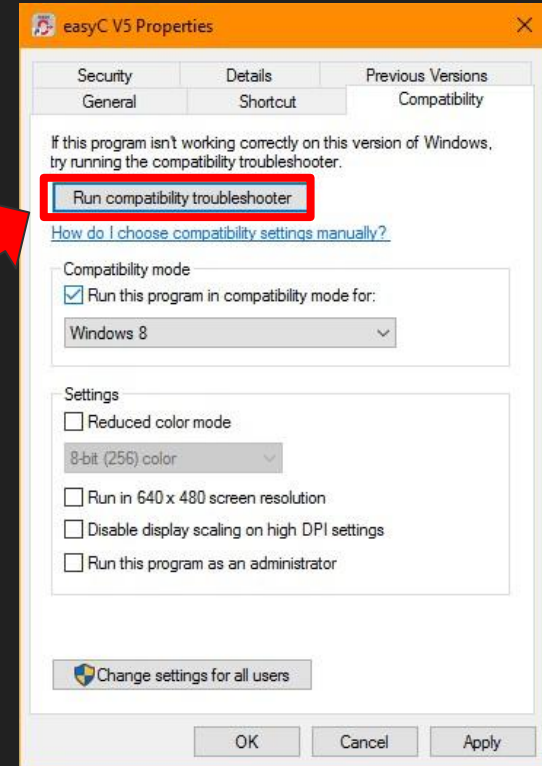
EasyC for VEX Install Instructions

Select Compatibility



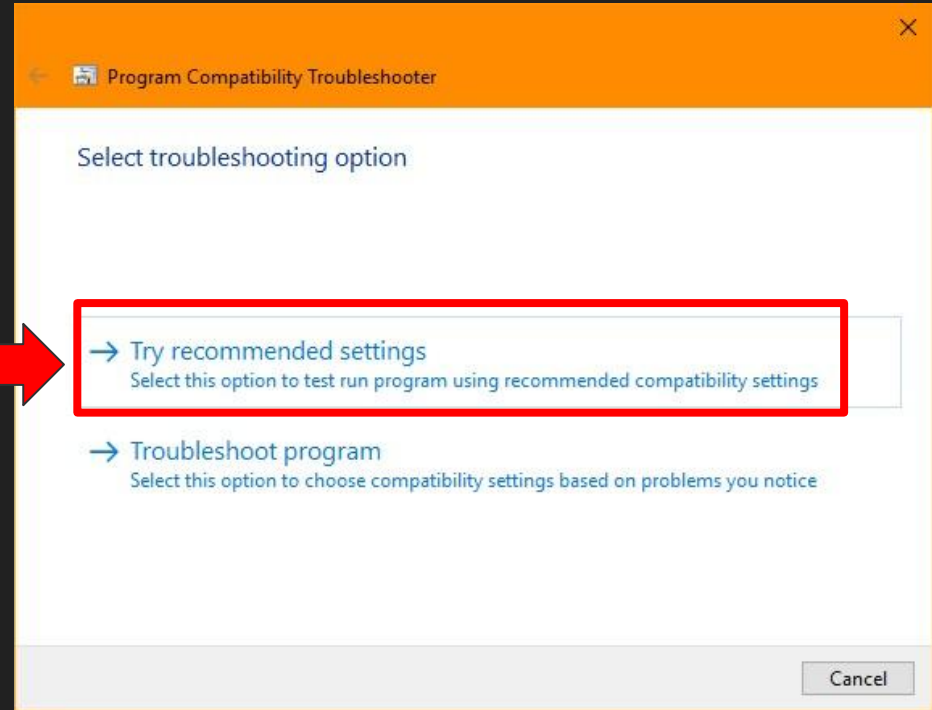
EasyC for VEX Install Instructions

Click “Run compatibility troubleshooter”



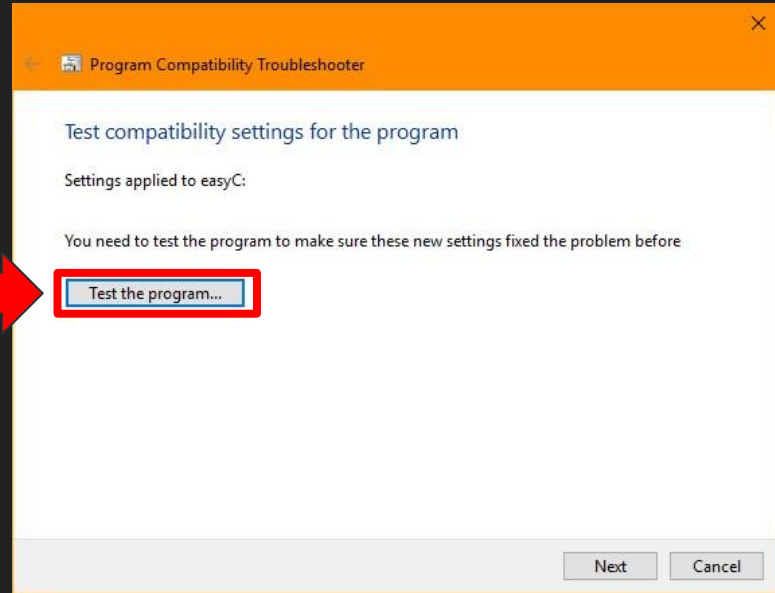
EasyC for VEX Install Instructions

Click “Try
recommended settings”



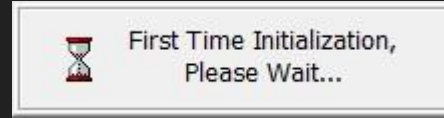
EasyC for VEX Install Instructions

Click “Test the program...”



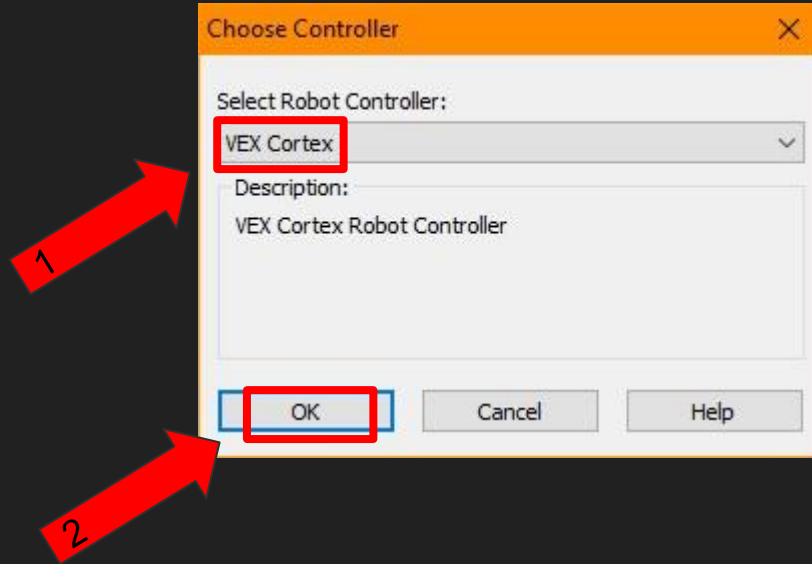
EasyC for VEX Install Instructions

If this window pops up,
just wait until the next
one.



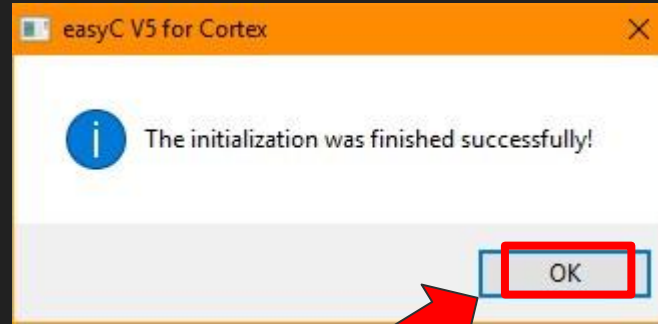
EasyC for VEX Install Instructions

If this window pops up then select VEX Cortex from the drop down menu and click OK



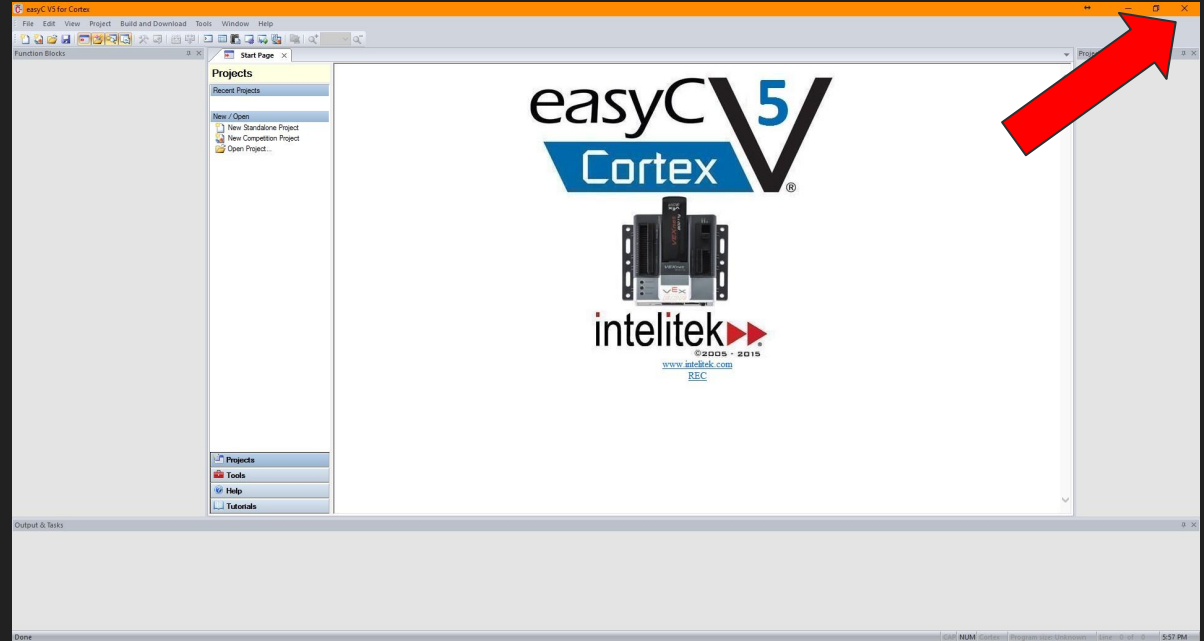
EasyC for VEX Install Instructions

Click OK



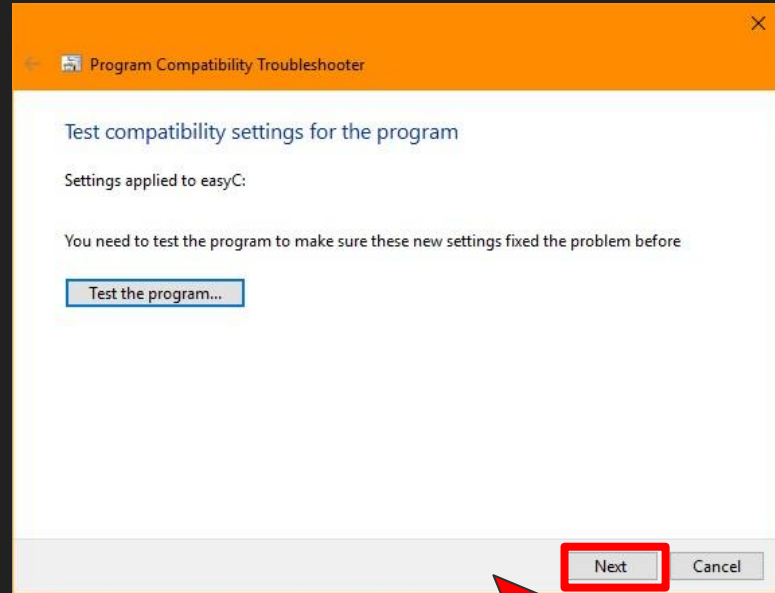
EasyC for VEX Install Instructions

If this window shows up now, close the program.



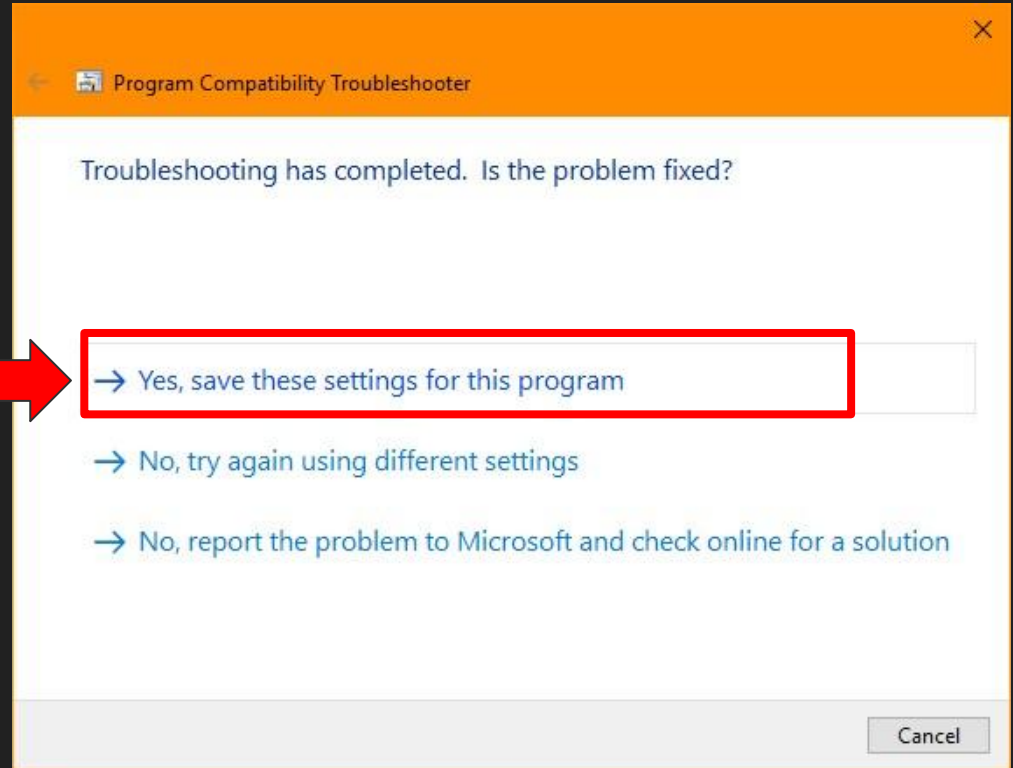
EasyC for VEX Install Instructions

Click Next



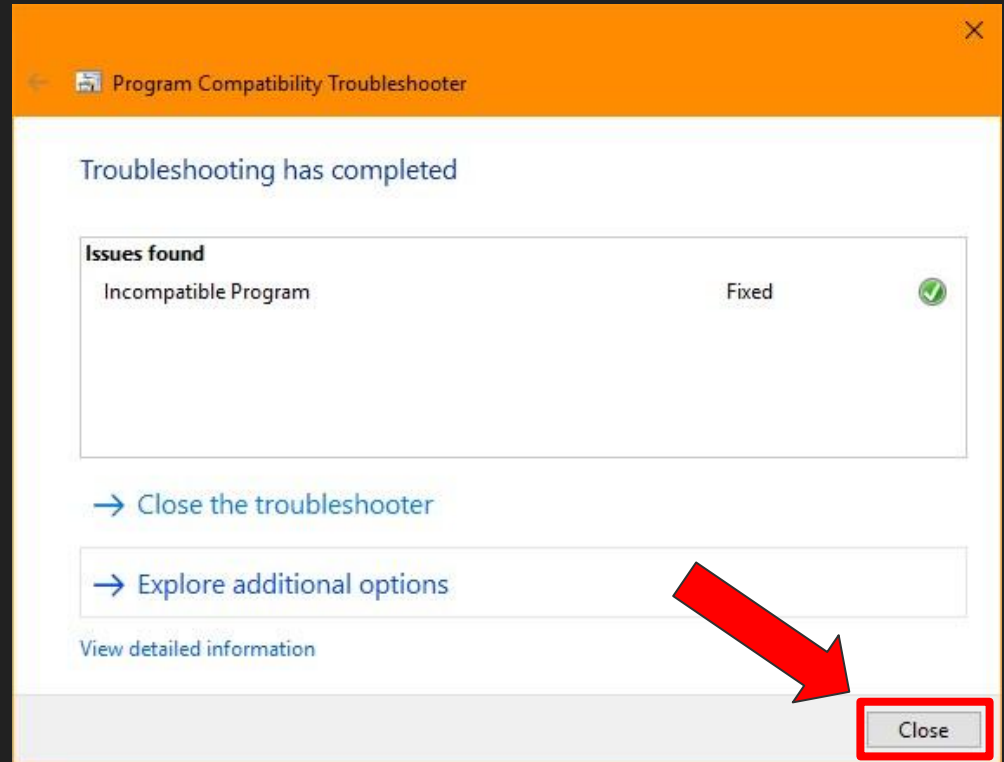
EasyC for VEX Install Instructions

Click “Yes, save these settings for this program”



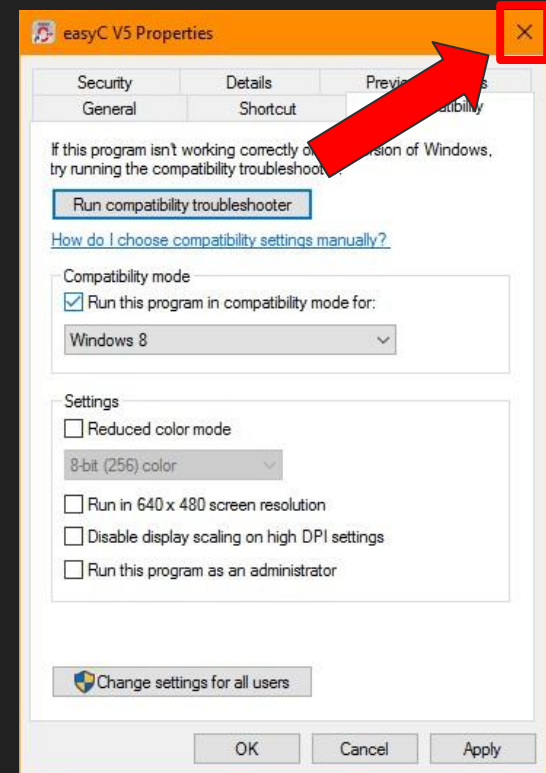
EasyC for VEX Install Instructions

Click Close



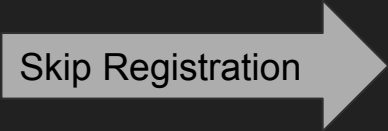
EasyC for VEX Install Instructions

Close the properties
window



EasyC for VEX Install Instructions

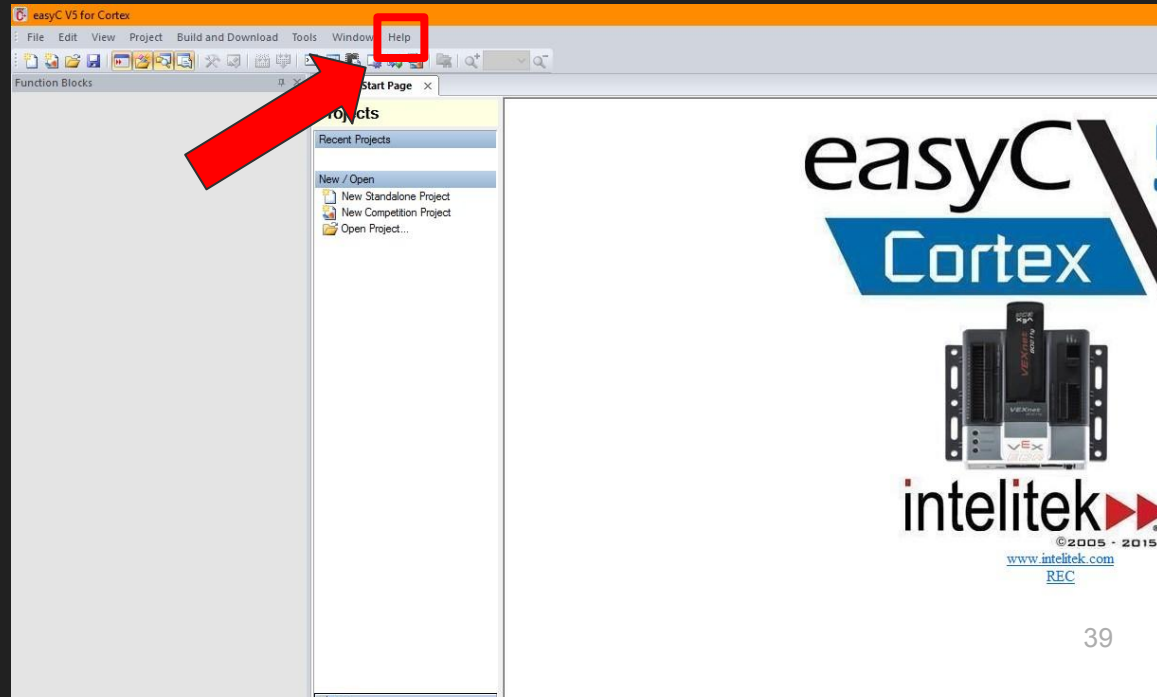
You are now done installing EasyC for VEX. Default installation is a 15-Day trial, if you have a license click next slide, if not, click the arrow.



Skip Registration

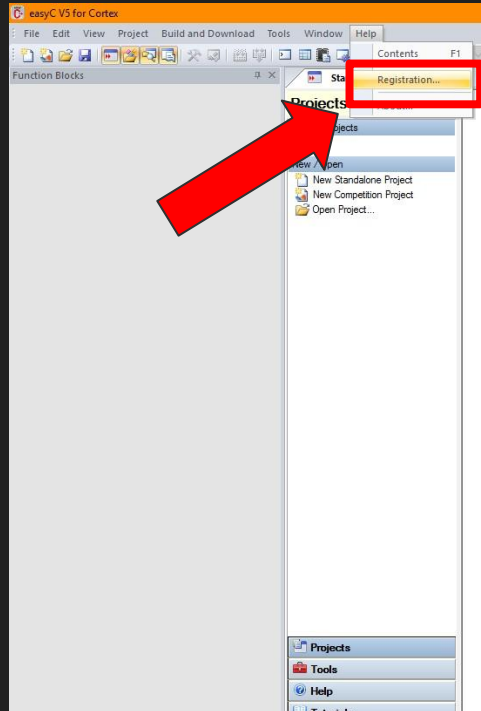
EasyC for VEX Install Instructions

While EasyC is running
click the Help drop down
menu



EasyC for VEX Registration

Click Registration



EasyC for VEX Registration

Fill out the registration form appropriately.

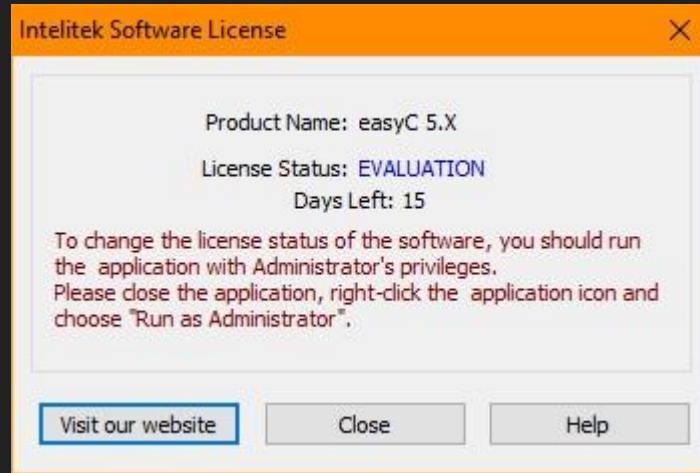
The screenshot shows a window titled "Intelitek Software License". At the top is the Intelitek logo. The main text area contains instructions: "To complete the installation, you need to register your software. Please enter your CD key, select 'Unlock', and follow the Instructions. To subscribe to the software, please mark the 'Subscription License' checkbox. Meanwhile, you may operate a fully-functional copy of **easyC 5.X** in evaluation mode for the number of days left in the 'evaluation period' shown below."

Below the text, it displays "License Status: EVALUATION" and "Days Left: 15". There is a text field for "PC Specific Code:". Under the "Registration:" section, there are three radio buttons: "Online" (which is selected), "E-mail", and "Manual Unlock". Below these is a red prompt "Please Enter Your CD Key:" followed by three text boxes separated by dots. A checkbox for "Subscription License" is located below the CD key fields. A large "Unlock" button is centered at the bottom of the main area. At the very bottom of the window are three buttons: "Visit our website", "Cancel", and "Help".

EasyC for VEX Registration

If you got this message,
close the program. If not,
click the arrow.

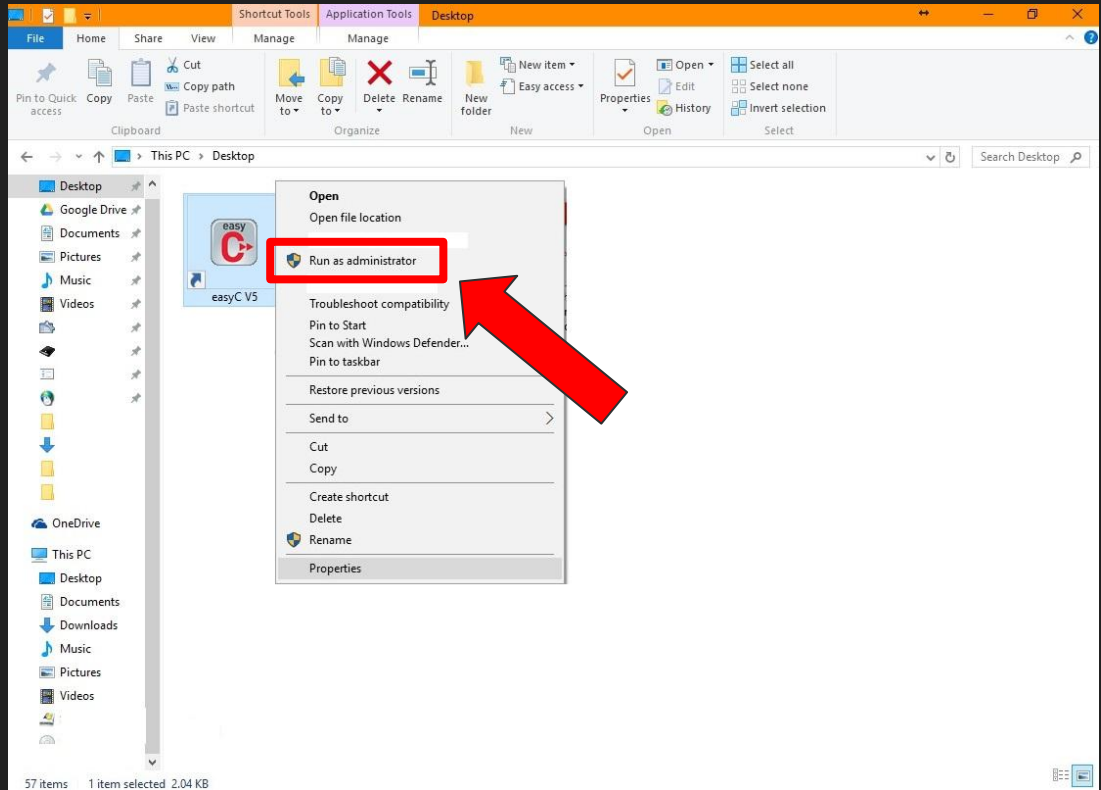
Skip to completion



EasyC for VEX Registration

Right click on the shortcut icon, and select Run as administrator, then repeat prior steps.

Go back to start of registration



EasyC for VEX Registration

You are now done registering your copy of EasyC for VEX.
There is nothing more required to set up for EasyC.

RobotC for VEX

Will be used for the 2nd ¼ of class

Text based IDE

Works with VEX EDR Cortex (PIC?)

\$79 for 1 license



Skip Install Instructions

RobotC for VEX Install Instructions

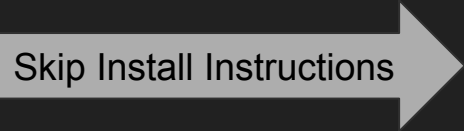
Eclipse for FRC

Will be used for the 3rd $\frac{1}{4}$ of class

Text based IDE with VCS

Works with roboRIO & Git

Free



Skip Install Instructions

Eclipse for VEX Install Instructions

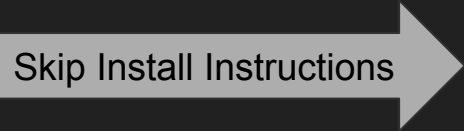
VJC for Abilix

Will be used for the 4th (LAST) ¼ of class

Visual Drag & Drop as well as Text based IDE

Works with C-Series

Free



Skip Install Instructions

VJC for Abilix Install Instructions

Accounts

This course will use several online features and accounts may be required. Please ensure that you have the following for each quarter:

Slack NPHS PFR 2016 [LINK]

Git PFR [LINK]

1st $\frac{1}{4}$

- Email, Slack

2nd $\frac{1}{4}$

- Email, Slack

3rd $\frac{1}{4}$

- Email, Slack, Git

4th $\frac{1}{4}$

- Email, Slack

fin

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